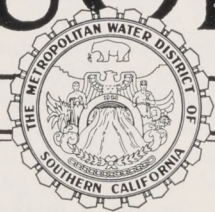


• COLORADO RIVER • AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT



OF SOUTHERN CALIFORNIA

VOLUME XXV

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NUMBER 11

Work on Second San Diego Aqueduct is Moving Forward

Construction work on the 33-mile section of the second San Diego Aqueduct being built and financed by the Metropolitan Water District is being pushed forward on all contracts, District General Manager and Chief Engineer Robert B. Diemer announced this month.

The new line takes off on the main Colorado River Aqueduct at a point near Cottonwood Avenue in Riverside County. It will more than double the capacity of Colorado River Aqueduct delivery facilities serving the San Diego County Water Authority, Mr. Diemer pointed out.

The first barrel of the first San Diego line was completed in 1947 and the second barrel in 1954. The combined capacity of the two barrels of the first line is approximately 200 cubic feet per second. The upper 15 miles of the second aqueduct will have a capacity of 1000 cubic feet per second; the remainder of the new line will have a capacity of 250 cubic feet per second.

Pipe laying on two major contracts on the new line is now more than 50 percent complete, Mr. Diemer said. These contracts are held by Ukropina, Polich and Kral and by Vido Artukovich and Son and will represent investments by the District of \$6,200,000 and \$3,700,000 respectively. The two contracts call for the placing of more than 18 miles of 75-inch diameter pipe. This portion of the aqueduct is the most southerly part being constructed by the District and extends 5.9 miles into San Diego County.

The northerly portion of the line will be mostly open canal sections with some box siphons and pipe siphons. The contract for the canal sections and box siphons is held by Winston Bros. Company. This portion of the line will call for an investment by the District of \$5,900,000. Excavation for the canal sections is now being carried forward.

(Continued on Page Three)



A view of the rugged terrain being traversed by the northern section of the second San Diego Aqueduct being constructed by the Metropolitan Water District is shown in the above photo. This portion of the job, which is being performed by Ukropina, Polich and Kral, is located about two miles south of Temecula in Riverside County. The pipe shown here is 75 inches in diameter and has a capacity of 250 cubic feet per second. The contract for this section of the new San Diego line bears a completion date of June 30, 1959.

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Water Deliveries Above Similar Period Last Year

Despite the above normal rainfall for the 1957-58 season which served to cut down the need for purchase of water for many individual users, the delivery of Colorado River water was increased during the first four months of the current fiscal year, as compared with the same period of 1957, it was pointed out by Robert B. Diemer, General Manager and Chief Engineer of the District.

Deliveries of softened Colorado River water by the District grew from 91,172 acre-feet to 93,260 acre-feet, an increase of 2% for the four months period, Mr. Diemer pointed out. The 1957-58 rains in the San Diego County and Riverside County areas resulted in these sections in a drop in water deliveries from 77,114

acre-feet in 1957 to 54,691 acre-feet in 1958, a decrease of 29%.

Use of natural Colorado River water for spreading purposes to help replenish underground water basins in Los Angeles and Orange counties jumped from 44,046 acre-feet to 86,962 acre-feet, or an increase of 98%. Mr. Diemer pointed out that these three classes of water deliveries show an average increase of 10.6%, and that a large part of this increase is due to a marked rise in delivery of natural Colorado River water for underground replenishment purposes.

"During the first year the Aqueduct was in operation, 1941-42, the District sold less than 10,000 acre-feet of water to its member cities," Mr. Diemer said. "Last year our deliveries amounted to 539,732 acre-feet."

He pointed out that in 1941 the Metropolitan Water District included only 13 cities. Today the District is comprised of 83 incorporated cities and large unincorporated areas. It now includes approximately one-half of the assessed valuation and population of the entire State.

Mr. Diemer said that the District is currently engaged in a \$200 million expansion program to bring the main aqueduct to its full ultimate capacity and to expand the distribution system to help meet the increasing need for water.

"When this expansion work is completed early in 1960, the District will be able to supply the needs of about

(Continued on Page Three)

For the RECORD

(The following items are noted from the report of General Manager and Chief Engineer Robert B. Diemer, filed November, 1958, covering District operations for October, 1958.)

Colorado River—The water surface of Lake Mead dropped 3.05 feet to elevation 1192.52 feet above sea level and usable storage decreased 430,000 acre-feet to 22,896,000 acre-feet on October 31, 1958. The discharge at Hoover Dam in October averaged 11,840 cubic feet per second as compared with 13,310 in September 1958 and with 11,370 in October 1957. Discharge at Parker Dam in October averaged 10,030 cfs.

Pumping and Power—Hayfield plant delivered 48,619 acre-feet for distribution during October. Pumping was continuous on a 4-pump basis throughout the month. Pumping Unit No. 6 at Hayfield was placed in operation replacing Unit No. 1 for 19 hours beginning on October 15, this being the first time Unit No. 6 has been in operation. Hoover power plant and the District's system were in parallel continuously; the Edison system and Parker-Davis system were out of parallel with the District for 9 hours, 45 minutes, and 8 hours, 31 minutes, respectively. The District's share of Parker energy for the month amounted to 20,597,429 kwhrs and Edison interchange energy delivered to the District amounted to 25,790,400 kwhrs. Peak deliveries to and from Edison Company were 83,000 and 115,000 kw respectively.

Weymouth Softening and Filtration Plant—Colorado River water was softened from 302 ppm of hardness to 156 ppm at an average rate of 351 cfs. Daily rate of flow varied from a maximum of 487 cfs to a minimum of 233.

Construction—Work on Schedules 76SC, 77SC and 78SC (Lower Feeder) the contract is 71% complete; Schedules SD8P and SD9P (San Diego Aqueduct) the contract is 54% complete, and Schedules SD10P and SD11SC contract is 45% Complete.

Pumping Plant Expansion—The contract on the installation of Pumping Units 7, 8 and 9 is 39% complete; Pump Delivery Line No. 3 is 85% complete.

Siphon work on main aqueduct (Earp to Whitewater)—Contracts 669 and 672—is 95% complete.

Purchasing—The total expenditures covered by 372 purchase orders and 10 agreements in October aggregated approximately \$146,247.



Three members of the American Pipe and Construction Company, which is now completing the installation of the second barrel of siphons on the main Colorado River Aqueduct east of the San Jacinto tunnel, are shown before the huge wheels of the "Pipemobile" being used to install the pipe. Left to right are Clyde Grant, Project Superintendent, O. M. Hooper, Project Manager on this job, and Fred Jenkins, Vice President of Production. Both Clyde Grant and Fred Jenkins worked on the Colorado River Aqueduct in its first development. O. M. Hooper has recently been named Vice President of Construction for the Company.

District Mourns Sudden Death of Edward A. Clarke



EDWARD A. CLARKE

Edward A. Clarke, Controller for the Metropolitan Water District, died suddenly Monday night, December 1, at his home. He was 57 and resided at 434 South Griffith Park Drive, Burbank. His death was caused by a heart attack.

Mr. Clarke entered the employ of the Metropolitan Water District in 1933, and has been in the service of the District continuously since that time. Starting as a General Clerk, he rose to the position of Accountant in 1942 and Chief Accountant in 1948. In 1956 he was promoted to Assistant Controller and in September of this year he was named to the position of Controller, succeeding Albert W. McKinlay who died July 11.

As Controller of the District, Mr. Clarke was in charge of the fiscal affairs of the District, including the issuance of bonds, and only last month he supervised the issuance of \$18,000,000 in Waterworks Bonds to carry forward the District's current expansion program.

He was responsible for all auditing and general accounting functions and maintained all general ledgers which display the complete financial affairs of the District. He also prepared the reports and assembled certificates of the county auditors relating to assessed valuations upon which tax levies are determined.

Mr. Clarke was born in Bryant, South Dakota, and came with his parents to Southern California at an early age. He was educated in Los Angeles city schools and acquired several years of valuable experience in freight traffic, accounting and purchasing with the Luckenbach Steamship Company and the Bethlehem Shipbuilding Corporation.

Status of Supreme Court Suit Told by Special Counsel

A report on the status of work in connection with the Supreme Court Suit was made by Special Counsel James H. Howard at the November 18 meeting of the Metropolitan Water District Board of Directors.

Following are excerpts from Mr. Howard's report.

"Since my last report, dated September 15, 1958, there has been no judicial action modifying the status of the above-styled litigation. The pending motion on the part of Arizona for leave to file amended pleadings has not been ruled out. The parties are proceeding under a direction of the Court to file such proposed findings of fact and conclusions of law as will support the decree sought by the several parties, respectively. . . .

"The State's Attorney General's Office and the several California agencies named as defendants, including the Metropolitan Water District, are co-operating in the preparation of a single presentation on behalf of the State and its agencies. Findings and conclusions relating specifically to the Metropolitan Water District have been prepared and circulated among all California Counsel in the case. . . .

"Numerous conferences have been held for the purpose of crystalizing the California position and preserving the solidarity of the California front.

"We expect to be able to comply with the Court's directions and file a document on behalf of California and its agencies by March 1, 1959. After that time, we will have sixty days in which to prepare and file replies to any adverse briefs. Thereafter, we will have an additional period of thirty days in which to file closing briefs. All briefs are scheduled to be filed by June 1, 1959.

"We will probably not be advised as to whether oral arguments will be heard until after the Special Master has had an opportunity to study the briefs. He may then call for oral discussion of specific issues."

Mr. Clarke is survived by his wife, Vivien; a son, Wayne; four sisters, Mrs. Pardon (Lillian) Cave, of Winton, California; Mrs. J. Sinclair (Grace) Dowey, of Van Nuys; Mrs. Albert (Edith) Allegra, of San Pedro; Mrs. Wilder (Laura) Hartley, of San Pedro; and a brother, Mr. Roger Clarke, of Long Beach.

Funeral services were private and interment was at Roosevelt Memorial Park, Gardena.

Second San Diego Aqueduct

(Continued from Page One)

The American Pipe and Construction Company holds the contract for the construction of six pipe siphons on the northern part of the line and pipe fabrication is now under way. These siphons will cost approximately \$580,000, bringing the total estimated District investment in the second San Diego Aqueduct to \$16,380,000.

All of this work is exclusive of the expansion work on the main Colorado River Aqueduct which will make possible the delivery of more water into the second San Diego line.

The San Diego County Water Authority, which is constructing the southerly portion of the line from the end of the District's line to Lower Otay Reservoir in Southern San Diego County, has already awarded contracts for the construction of three sections of the line and a fourth and final section will be contracted for next spring.

Pipe laying on the first of the three sections under contract is now essentially completed. This section extends 10½ miles south of the end of the District's line. Also under construction is the second section, extending 18½ miles to a point five miles north of Miramar.

Construction of the third section, nearly 17 miles long, will soon be started. This runs to Highway 80 near La Mesa. The fourth section will extend 13.7 miles to the Lower Otay Reservoir. The entire line, from the main Colorado River Aqueduct to its terminus, will be more than 90 miles in length.

The portion of the second aqueduct being constructed by the San Diego County Water Authority is financed by a \$35 million bond issue voted last year by the residents of the Authority.

Water Deliveries

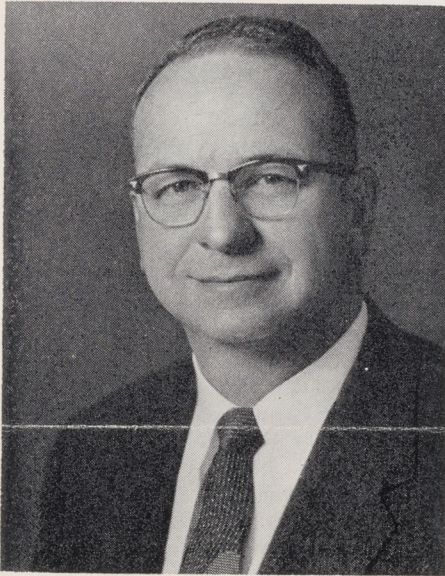
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3,500,000 more people than now live in Southern California," Mr. Diemer declared.

"In other words, the delivery capacity of the Aqueduct will just about be doubled early in 1960. This means that we will have large quantities of Colorado River water available to help replenish our seriously depleted underground basins in addition to meeting day by day domestic and industrial needs.

"These basins are large underground 'reservoirs' which were filled by rains and mountain runoff during the long years before men began to draw off this ground water for irrigation and domestic uses," Mr. Diemer pointed out.

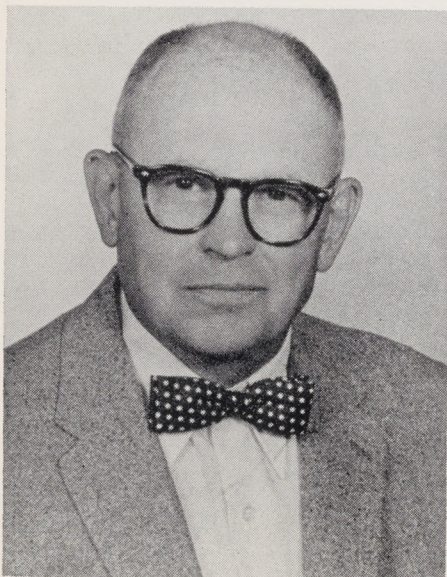
NEWS FROM FIELD AND OFFICE



William Paul Winn—25 Years of Service

William Paul Winn became eligible for his 25-year service pin on September 21, 1958. He received his B.S. degree in Electrical Engineering from the University of California at Berkeley in 1933, and started to work for the District as a Junior Engineer in the Los Angeles office on September 21, 1933.

During the next seven years, Paul performed excellent work in the Electrical-Mechanical Division in connection with economic studies of Boulder Dam power rates, testing of aqueduct pumping plants, water-hammer studies, and other essential related work.



Fred L. Richards—25 Years of Service

On completion of Aqueduct construction work, Paul spent several years as Assistant Engineer on Pumping Plant and Transmission Line operation. He was stationed at Gene Village from 1944 to 1946, after which he returned to the Los Angeles office as Engineer in the Electrical-Mechanical Division. He was advanced to Senior Engineer in 1954. Paul helped prepare specifications and did related work in connection with the Pumping Plant expansion program. At present he works in the Construction-Design Section as the head mechanical engineer on the design of valve assemblies, remote control systems, and other mechanical features of the Distribution System.

* * *

Fred L. Richards became eligible for his 25-year service pin on October 18, 1958, having first been employed by the District as a Mechanic in the Los Angeles garage on October 18, 1933.

For the past twenty-five years he has worked loyally and efficiently as a Mechanic, maintaining and repairing the District's automotive equipment at this location. During the three-year period from 1942 to 1945, when Gene Reynolds was on Military Leave, Fred was in charge of the Los Angeles garage.

* * *

Vincent G. Preiss became eligible for his 20-year service pin on November 11, 1958. He was first employed as a laborer. He has served the District in many ways, as a Relief Cook, Truck Driver, Maintenance Helper, and Mechanic. During the early construction period, Vince was located at Division 1 and then at Division 3. At the end of construction, he entered into the Aqueduct maintenance work.

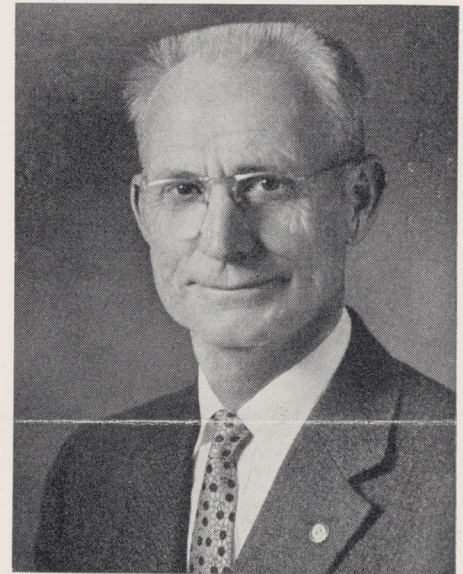
In June of 1942 Vince left the District, but in December 1944 he returned, first working at Camino Switching Station and later in October 1950 at Hayfield Pumping Plant where he is now serving as Maintenance Mechanic.

* * *

Melvin Coppersmith, Filter Operator at the Softening Plant, and his wife are the proud parents of Brian Wendell, who arrived November 19. The young man weighed 6 pounds, 11 ounces.

* * *

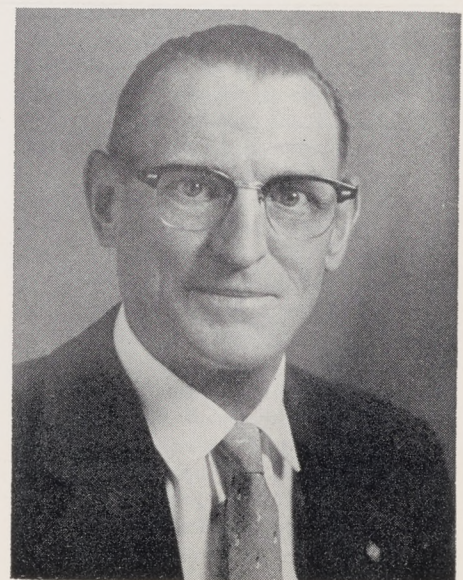
Don Hutsell, District Inspector at the American Pipe and Construction Company, was married to Elizabeth Colbath on October 25 in Los Angeles. The happy couple are making their home in Pomona.



Le Roy G. Costello—25 Years of Service

LeRoy G. "Pinky" Costello became eligible for his 25-year service pin on September 6, 1958, having first been employed as a telephone switchboard operator at Berdoo Camp. He was later located at the Banning office and at Hayfield Pumping Plant. "Pinky" has continued with telephone work in some form or other during all of his service with the District.

Now he serves as an operator at La Verne, principally to relieve the other operators, and as a Maintenance Man for telephone equipment and overhead pole lines between La Verne and Lake Mathews. His headquarters are the Softening Plant at La Verne.



Vincent G. Preiss—20 Years of Service